

# Pandemic Executive Briefing

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# Pandemic

- What is the difference between pandemic and epidemic?
- How often do pandemics occur and when was the last one?
  - 10 to 13 influenza pandemics since 1700
  - 3 in the 20<sup>th</sup> Century: 1 severe and 2 mild
  - It has been more than 88 years since there has been a major shift in Influenza A viruses: long overdue
- Why is the H5N1 Avian Flu virus a concern?
  - It's the worst Avian Influenza for birds ever recorded
  - Current recorded mortality rate in humans is 57%

# Six Phases of Pandemic

- Phase 1 – New influenza virus subtype in avian populations
- Phase 2 – New influenza spreads geographically and to mammals
- Phase 3 – Limited transmission from avian or mammal populations to humans
- Phase 4 – Limited human to human transmission and the evidence of human clusters
- Phase 5 – Large clusters of human to human transmission in localized areas
- Phase 6 – Efficient and sustained transmission with global impact – the 3 waves

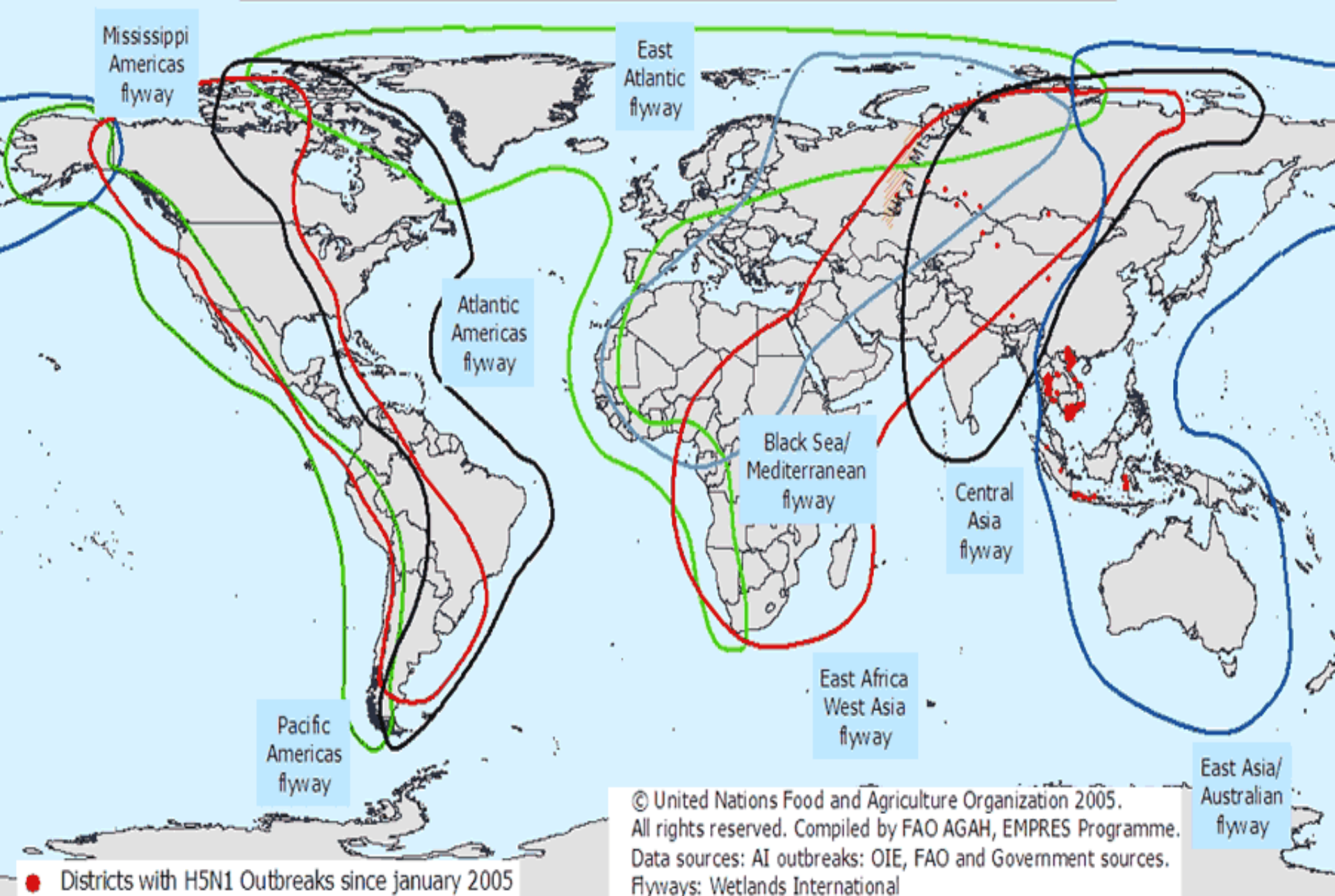


# Who is concerned?

- Epidemiologists, Virologists, Zoologists
- WHO & CDC
- US Federal & State Governments
- Private Sector Experts and Leaders
- Foreign Governments
  - Australia – 8 week mandatory quarantine
  - Russia – 1 mil birds lost from Feb to April
  - Canada
    - Working with Iceland
    - Anti-viral/vaccine production enough for all citizens

# H5N1 outbreaks in 2005 and major flyways of migratory birds

Situation on 30 August 2005



# Historical Data

- 1918 Spanish Influenza outbreak lasted one year
- 3 waves circled the globe
  - The second wave was 10 times as lethal as the first
- 28% of all Americans were infected
  - Majority of those infected were age 15 to 35
- 675,000 recorded deaths in US
- Death toll in Philadelphia alone was 13,000 with 150,000 cases reported
  - Death rate was 700 times higher than normal during October '18
- Conservative estimate of 50 million deaths :3% of the global population died
  - Moderate estimates are upwards of 100 million



# Historical Iowa Data from 1918

- October 5<sup>th</sup> first reported case
- Same day hospitals refused to take new patients
- After 25 reported cases the Surgeon General recommended closing public gatherings
- One week later 8,100 reported cases, 70 deaths
- Next week 21,000 reported cases
- General quarantine for the entire city
  - Schools closed
  - Recreational venues closed
  - Other gathering places closed

# Lessons Learned from SARS

- 44 deaths
- 140+ confirmed cases
- 240+ suspected cases
- 27,000 individuals placed in quarantine!
  - 70 individuals quarantined for every known or suspected case
- Drastic measures had to be taken to contain the outbreak and prevent a pandemic



# Mortality/Morbidity Projections

- Northwestern Mutual Life actuaries conclude the death rate (conservatively) will more than triple: nearly 2 million deaths in the US alone
- WHO places conservative estimates for a **MILD** pandemic at 7 million deaths globally
  - **Upper estimates for a severe pandemic are over 300 million deaths** (=to current US population)
  - Estimates of 25% of the global population will be infected: That is more than 1.5 billion people

# Economic Projections/Impacts

- World Bank estimates significant revenue and productivity losses
  - \$550 billion dollars in high income countries
  - Over \$800 billion globally
- Congressional Budget Office predicts a global recession similar to the one following WWII
- Insurance Information Institute estimates an additional \$133 billion in death claims
  - This does not include health care claims

# Congressional Budget Office Projections

- On average 30% of workers will be infected simultaneously
- Another 20% will be caring for sick
- 2.5% will die globally
- An average worker will be out 3 weeks
  - Contagious 2 days prior to symptom onset
  - 5 to 8 days of symptoms in the absence of complications
  - 7 days contagious after all symptoms go away
- Long term reduction of the labor force by 7.5%
  - Spanish Flu targeted 15-35 yr olds



# Social Impact Projections

- 50% of the population directly impacted
- 50% reduction of most services, including all critical infrastructure, security and safety, governmental, military, etc.
- Remaining services will be allocated to medical and governmental entities before private or business sector
- Significant increase in demand for medical and insurance services

# Social Impact Projections

- Shutdown of all public meetings, religious gatherings and most public facilities
- Governments will enforce mandatory quarantine and isolation
  - Individuals, families and countries
- Strain on all morgue, mortuary and funeral services, including shortages of caskets/urns
- Many schools and daycares closed: high absenteeism throughout education sector

# What would **WORST CASE** be?

- 30 % morbidity
  - 1 in 3 ill = 100 million in US / 2 billion globally
  - Harvard Review estimates more than 1 billion could require medical care during that year
- 5% mortality rate
  - 1 in 20 die = 15 million in US / 300 million globally
- 5% reduction in Gross Domestic Product
  - \$500 million in high income countries
  - \$800 million global reduction



# Iowa's **WORST** CASE?

- We have 3 million people state wide
  - 1 million ill during the pandemic
  - 150,000 deaths is 5% mortality
  - 75,000 deaths is 2.5% mortality (is equal to the lowest estimate for the 1918 stats)
- Polk County has roughly 300,000
  - 100,000 ill during pandemic
  - 5,000 deaths is 5% mortality
  - 2,500 deaths is 2.5% mortality
- Numbers **NOT** distributed evenly
- Deaths and illness would be in addition to normal rates – adding to hospital/mortuary overloads

# Issues Most People Ignore

- Virulence of H5N1 and the ramifications of it's current behavior
- Potential Shortages
  - How long has it been since anyone in a first world country has been without a reliable food source?
- Monitoring is inadequate in Asia
- Global transportation will drastically reduce the warning period – everywhere at once!

# Summary

- 90% of the experts are saying a pandemic is inevitable
- Anti-virals and vaccine will be insufficient
- Everywhere simultaneously
- Public reactions to the supply chain being interrupted, especially in large metropolitan areas is a serious issue
- At this time the US is not prepared – neither our governments or private sector



# Business Continuity Planning

Dale Sanders

# IT Considerations

Joe Solem

# IT Considerations

- Anything
- Anywhere
- Anytime



# IT Considerations

- Identify Key Personnel
  - Data Base Administrators
  - Network Administrators
  - Helpdesk
  - Operations

# IT Considerations

- Ability to work from home
  - Tools
    - Laptops
    - VPN
    - Data line
    - Live Meeting
    - Remote Desktop, Dameware, etc.

# IT Considerations

- Ability to communicate
  - Cell phones
  - Pagers
  - Blackberry
  - Walkie-talkie



# IT Considerations

- Supply Chain Concerns
  - Spare equipment
  - Vendor agreements

# IT Considerations

- Documentation
  - Is it up to date?

# IT Considerations

Don't wait -- ***START NOW!***